

REMARKS

Claims 1-68 were previously pending in this application. The Office Action withdraws claims 17-65 in response to the Applicant electing Group 1, with traverse, in reply to a Restriction Requirement. By this amendment, Applicants are amending claims 1 and 66. New claim 69 is added herein. As a result, claims 1-16 and 66-69 are pending for examination with claim 1 being an independent claim. No new matter has been added.

Information Disclosure Statement

The Office Action refers to the International Search Reports included in the Information Disclosure Statement (“IDS”) submitted August 3, 2004 and indicates that “the specific relationship between any of the referenced PCT applications” is unclear. As stated in the IDS: the PCT International Application PCT/US03/37230 is the international application corresponding to this Application; the PCT International Application PCT/US03/1416 is the international application corresponding to the parent-application 10/430,040; and the PCT International Application PCT/US02/21756 is the international application corresponding to the parent-application 10/192,757. As further clarification, this application is a Continuation-in-Part of each of the listed parent applications, as reflected in the Corrected Filing Receipt mailed from the U.S. Patent and Trademark Office on April 29, 2005.

Rejection under 35 U.S.C. §112, Second paragraph

The Office Action rejects claims 8, 10 and 11 under 35 U.S.C. §112, second paragraph, as being indefinite for allegedly “failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” In particular, the Office Action indicates that the term “pump” lacks antecedent basis in each of claims 8, 10 and 11. Applicant respectively submits that each of claims 8, 10 and 11 are definite.

Claim 8 depends from claim 68. Claim 68 recites “the compartment being adapted to receive pressurized fluid from a pump.” (Emphasis added.) Similarly, claim 10 depends from claim 2. Claim 2 recites “the compartment being adapted to receive pressurized fluid from a pump.” (Emphasis added.) Claim 11 depends from claim 10. Accordingly, antecedent basis for the term “pump” is provided in claim 2. Accordingly, withdrawal of the rejection of claims 8, 10 and 11 under 35 U.S.C. §112, second paragraph, is respectfully requested.

Rejection under 35 U.S.C. §112, First paragraph

The Office Action rejects claims 1-16 and 66-68 under 35 U.S.C. §112, second paragraph, as allegedly failing to comply with the written description requirement. In particular, the Office Action alleges that the “self-closing cover,” recited in claim 1 and the self-closing cover “hingedly coupled to the inflatable bladder” as recited in claim 66 contains “subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time of the application was filed, had possession of the claimed invention.

Without acceding to the propriety of the rejection of claim 66, claim 66 is amended herein to recite that the cover is “hingedly coupled to the valve.” (Emphasis added.) In addition, claim 1 is amended herein to recite “a cover” rather than “a self-closing cover.” New claim 69 which depends from claim 1 recites that “the cover comprises a self-closing cover.” Accordingly, the following remarks refer to the self-closing cover as recited in claim 69.

Applicant respectfully asserts that the “self-closing cover” is disclosed in the originally-filed application so as to satisfy both the enablement and written description requirements. In particular, the “self-closing cover” is disclosed in a way that enables one skilled in the art, at the time the application was filed to make and use the invention, as claimed in amended claim 1 and added claim 69, without undue experimentation, which is the standard for enablement. In addition, the specification and figures, as discussed below, do convey with reasonable clarity that the inventor was in possession of the invention, which is the standard for the written description requirement (rather than the presence or absence of literal support in the specification for the claim language). See *In re Edwards*, 558[568] F. 2d 1349. It is case law that the content of the drawings may also be considered in determining compliance with the written description requirement, see *In re Baker*, 559 F. 2d 588, and that the drawings alone may provide a written description of an invention as required by §112. See *Vas-Cath Inc. v Mahurkar* 935 F.2d 1555.

Referring, for example, to FIGS. 4A-4C, which illustrates the operation of a self closing cover that can be biased open by an actuator arm and that returns, without any external aid, to a position in which the cover prevents the flow of fluid through the valve. That is, the cover 81 includes a surface 83 that interacts with a portion 86 of an actuator arm 84, where the actuator arm 84 is configured to bias the cover 81 upward so as to open the cover. (Specification at page

17, lines 27-31.) Further, the application describes that the actuator arm 84 may also comprise a spring assembly 96 which maintains the actuator arm 84 in an at rest position which is disengaged from the cover 81. (Specification at page 18, lines 10-13.)

Referring to the FIG 4A, there is illustrated a first position where the position of the actuator arm does not act on the portion 86 of the cover 81. FIG. 4B illustrates a second position of the actuator arm 84 that engages the portion 86 of the cover 81 to bias the cover upward to open the cover (and the valve), when a first lever 88 is used. Similarly, FIG. 4C illustrates a third position of the actuator arm 84 which engages the portion of the cover 81 to bias the cover upward to open the cover and the valve, and which also engages the switch 94 to bias on a pump (when a second lever 92 is used).

The movement of the cover between its upward position (illustrated in FIGS. 4B and 4C) and its closed position (illustrated in FIG. 4A) is illustrated as requiring no external force. Instead the cover is in the closed position whenever the actuator arm 84 is not engaging portion 86, as illustrated in FIG. 4A. That is, the cover is closed whenever the portion 86 is not engaged with the cover 81. Because the cover is closed when there is no external force is applied to the cover 81, it is inherent that the cover 81 is a self-closing cover. As illustrated and described, the cover 81 operates in this manner for this embodiment of the invention. As a result, upon reviewing the originally-filed application and figures, one of ordinary skill in the relevant art would understand that the cover 81 is a self-closing cover.

Further support that the cover is self-closing can be found, for example, in the application that also describes the assembly of FIGS. 4A-4C may be employed with an inflation device to independently “fill, deflate and control” a fluid level in an inflatable device that includes a plurality of fluid impermeable bladders where each bladder may be associated with a different assembly, and each assembly can be supplied fluid from a single fluid moving device (Specification at page 19, lines 6-10). This independent fluid control, as described in the application, would not be achievable without the cover 81 being a self-closing cover, because the diaphragm and valve would likely “open under sufficient fluid pressure from the fluid moving device [and] even in the absence of a biasing open of the self-sealing valve from the actuator arm 84” (Specification at page 18, lines 21-24) to provide air to a bladder (emphasized word added). That is, if the cover 81 for a valve associated with a first bladder were to remain open after, for example, the fluid level in the first bladder is adjusted downward (for example, were the cover

81 not a self-closing cover), the first bladder would receive fluid subsequently supplied for a second bladder from a fluid moving device common to each bladder. FIG. 6C illustrates one arrangement of the invention whereby a single pump 650 is employed with two valves 620a, 620b in which the self-closing feature of the cover is also necessarily apparent.

Accordingly, the specification and figures of the application do describe and support a self-closing cover and withdrawal of this rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1, 7, 10, 11, 13-15, 66 and 67 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,175,297 to Robbins et al. (hereinafter “Robbins”). Applicants respectfully submit that claims 1, 7, 10, 11, 13-15, 66 and 67 are patentable in view of Robbins because Robbins fails to describe any “valve comprising: (i) a diaphragm adapted to selectively maintain fluid in the bladder, and (ii) a cover configured to be biased open by a mechanical device, the cover being adapted to prevent the flow of fluid through the valve and into the bladder, when closed,” as recited in claim 1. The asserted “valve” comprising “a diaphragm 42” with a “self closing cover 43/44” of Robbins et al as identified in the Office Action and applied against claim 1, actually describes components of a pump 40, and does not describe “a valve comprising a diaphragm adapted to selectively maintain fluid in the bladder and a cover.”

Robbins describes a pump 40 that includes an inlet valve 43, an exhaust valve 44, and a diaphragm 42 which define a first pumping chamber 41, and an inlet valve 54, an exhaust valve 55, and a diaphragm 53 which define a second pumping chamber 52. (Col. 4, lines 35-44.) The pump is solenoid operated and reciprocates, in operation, to alternately draw air into the first pumping chamber 41 while discharging air from the second pumping chamber 52 and vice versa.

Neither diaphragm in Robbins is included in a valve; they are in the pump 40 which is coupled to a valve 30. In addition, neither of the inlet and exhaust valves maintain fluid in a bladder, the valve 30 does that (see FIG. 1). Accordingly, the reference is mischaracterized and claim 1 patentably distinguishes over the reference. Withdrawal of this rejection is respectfully requested.

The Office Action also rejected claims 1-6, 10-16, 67 and 68 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Publication No. 2002/0194678 to Chung (hereinafter Chung). Applicants respectfully submit that claims 1-6, 10-16, 67 and 68 are patentable in view of Chung because Chung fails to teach, disclose or suggest a fluid controller comprising “a cover configured to be biased open by a mechanical device, the cover being adapted to prevent the flow of fluid through the valve and into the bladder, when closed,” as recited in claim 1. For example, the diaphragm 436 and the cover 436 as identified in the Office Action, at page 5, and applied against claim 1 actually describe the same structure. Accordingly, the reference is mischaracterized. In addition, Chung discloses an air pump assembly including valves 436 and 436’, where one valve supplies a back support and a second valve supplies a mattress. (Page 3, paragraph 64) However, neither the valve 436 nor the valve 436’ include “a cover configured to be biased open by a mechanical device, the cover being adapted to prevent the flow of fluid through the valve and into the bladder, when closed,” as recited in claim 1. Chung does not even disclose a valve having a cover configured to be biased open.

Chung does describe a “valve switch” 431, 431’ may be employed to turn a valve on, and that a cap 4311, 4311’ may be used to operate the valve switch. (Page 3, paragraph 65) However, the mere recitation of the cap as disclosed in Chung fails to describe or suggest “a cover configured to be biased open by a mechanical device” where the “cover is adapted to prevent the flow of fluid through the valve and into the bladder, when closed.” The cap disclosed in Chung does not open and close and there is no suggestion in Chung to do so. Accordingly, Chung does not anticipate or render obvious independent Claim 1 and withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. §103

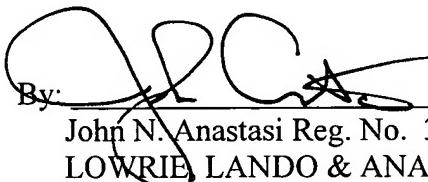
The Office Action rejected claims 7-9 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0194678 to Chung (hereinafter Chung). Without acceding to the appropriateness of the asserted modification of Chung, the asserted modification of Chung still does not cure the infirmities as discussed above, and therefore does not render obvious these claims which depend from independent Claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,
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Docket No.:C0852-703030

Date: May 4, 2006